

I 10645-63

PERIODICAL: Zhurnal obshchey khimii, v. 33, no. 4, 1963,  
1293-1294

TEXT: Ammonolysis of methylvinylidichlorosilane and  
methylallyldichlorosilane is performed. The effect of the amine  
with unlimited radicals is studied. The structure of the products is discussed  
and the properties of the silazanes are determined.

SUBMITTED: April 27, 1962

kes/sv  
Card 1/1

ACCESSION NR: AP4028548

S/0191/64/000/004/0027/0029

AUTHOR: Kuznetsova, A. G.; Andrianov, K. A.; Zhinkin, D. Ya.

TITLE: Formation of polymers by the hydrolytic co-condensation of diethyldichlorosilane (or dimethyldichlorosilane) and phenyltrichlorosilane

SOURCE: Plasticheskiye massy\*, no. 4, 1964, 27-29

TOPIC TAGS: siloxane polymer, hydrolytic co condensation, diethyl-dichlorosilane, phenyltrichlorosilane, polydialkylphenylhydroxysiloxane copolymer, polydialkylphenylsiloxane copolymer, hydrolysis rate, reaction mechanism

ABSTRACT: This work was conducted to explain the possible mechanism by which the polymers are formed during hydrolytic condensation of equimolar mixtures of diethyldichlorosilane (I) or dimethyldichlorosilane (II) and phenyltrichlorosilane (III). The chemical composition obtained by reaction of equimolar amounts of I (or II) with III; of diethyilsilanediol (IV) (or dimethylsilanediol (V)) with phenylsilanetriol (VI); and of IV with III. Regardless of the initial monomer, the product

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ACCESSION NR: AP4028548

obtained was  $[R_2SiOC_6H_5SiO(OH)]_m \cdot [R_2SiOC_6H_5SiO_{1.5}]_n$ , the copolymer of polydialkylphenylhydroxy- and polydialkylphenyl-siloxanes. In the various products the m:n ratio varied from 0.31 to 0.73 and (m+n) averaged 3-7. It is concluded that the polymers resulting from the hydrolytic co-condensation of the silanes are formed through a stage in which the corresponding organosilanols are condensed or formed by direct interaction of the organochlorosilane with the organosilanol, the predominance of the reaction being determined by the hydrolytic condensation conditions. No homopolymers were formed. In excess water the product always contains an equimolar ratio of dialkyl- and phenyl-siloxy groups. In insufficient water, when III is hydrolysed first, the product does not contain a 1:1 ratio of dialkyl- and phenyl siloxy groups. One of the causes for the formation of the copolymer (or II) with III or during condensation of the silanols IV (or V) with VI is attributed to the difference in influence of the alkyl and the phenyl radicals on the charges of the Si atoms in the original monomer. The alkyl reduces the positive charge and the phenyl increases the positive charge, and interaction occurs between these monomers to form the most stable system - copolymers with alternating monomer units in the molecule. Orig. art. has: 1 table and 4 formulas.  
Card 2/3

"APPROVED FOR RELEASE: 07/19/2001

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b 16398-65

was also shown to the author.

the 1970s, the U.S. and Soviet Union began to form the

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CIA-RDP86-00513R002064820003-6"

ZHINKIN, D.Ya.; MAL'NOVA, G.N.; GORISLAVSKAYA, ZH.V.

Simultaneous ammonolysis of triorganochlorosilanes with different  
radicals at the silicon atom. Zhur. ob. khim. 35 no.5:907-909  
Mys '65. (MIRA 18:6)

ZHINKIN, D.Ya., MAL'NOVA, G.N., POLONSKAYA, A.P., ANDRIANOV, K.A.

Simultaneous hydrolytic condensation of trimethyl-,  
triethylchlorosilanes, and phenyltrichlorosilane. Zhur. ob.  
khim. 35 no.5:909-911 My '65.

(MIRA 18:6)

"APPROVED FOR RELEASE: 07/19/2001

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CIA-RDP86-00513R002064820003-6"

MORGUNOVA, M.M.; SHINKIN, D.Y.

*Effect of the catalyst on the rate of transamination on polyalkyl  
cycloazilazanes with aliphatic diamines. Plast. massy no. 5,  
16-17 '65.*  
(MIRA 18:5)

L 2168-66 EWT(m)/EPF(c)/EWP(j) RM  
ACCESSION NR: AP5024501

UR/0191/65/000/010/0015/0016

678.845

41

B

AUTHOR: Semenova, Ye. A.; Makovskaya, T. N.; Zhinkin, D. Ya.; Andrianov,  
K. A. 4455

TITLE: Rearrangements of methylcyclosilazanes 7, 4455

SOURCE: Plasticheskiye massy, no. 10, 1965, 15-16

TOPIC TAGS: organosilicon compound, chemical reaction, chemical equilibrium, recombination reaction, chemical reaction kinetics, catalytic polymerization, catalysts

ABSTRACT: The effect of electrophilic catalysts at different temperatures on the mutual rearrangements of methylcyclosilazanes was investigated to explain previously obtained data. The conversion of hexamethylcyclotrisilazane (A) and octamethylcyclotetrasilazane (B) by the action of 2% ammonium sulfate of 1% concentrated sulfuric acid was studied in the 25-245 C range. Mutual rearrangement of the two cyclosilazanes occurred, and at temperatures above 150 C polymethylsilazanes were formed. The latter polymers were viscous yellow liquids having a cyclo-linear structure. Ammonium sulfate was most active in the

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L 2168-66

ACCESSION NR: AP5024501

ring-contracting reaction and promoted rearrangement only at temperatures above 100 C. The composition of the products obtained by action of sulfuric acid on A or B at a given temperature was about the same. Orig. art. has: 2 figures

ASSOCIATION: None

SUBMITTED: 00

NR REF SOV: 003

ENCL: 00

SUB CODE: OC, *lc*

OTHER: 000

Card 2/2

AP502764

AUTHORS: Zhinkin, D. Ya.; Morgunova, M. M.; Aksiryanov, A. A. (Akademian)

SOURCE CODE: UK/0020/75/63/02/211/026

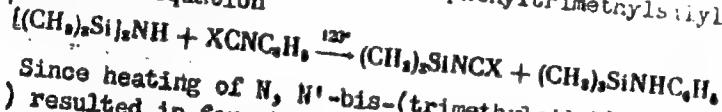
TOPIC: Reaction of hexamethyl disilazane with phenylisocyanate and phenylthioisocyanate compound

32  
B

SOURCE: AN SSSR. Doklady, v. 165, no. 1, 1965, 114-116

TOPIC TAGS: silicon compound, silane, organic synthetic process, organic isocyanate compound

ABSTRACT: Reaction of equimolecular amounts of hexamethyldisilazane (I) with phenylisocyanate (II) and phenylthioisocyanate (III) has been investigated at high temperatures. Under these conditions, instead of trialkylsilylurea expected by the authors (D. Ya. Zhinkin, M. M. Morgunova, et al., DAN, 158, 641, 1964), trimethylsilylisocyanate (IV) (or thioisocyanate (V)) and N-phenyltrimethylsilylamine (VI) were formed, according to the equation



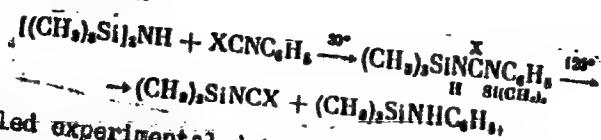
where X = O, S. Since heating of N, N'-bis-(trimethylsilyl)-N'-phenylurea (VII) (or thiourea (VIII)) resulted in formation of the same products, it was assumed that VII (or VIII) is an intermediate, formed in the first stages of interaction of I with II

UDC: 547.245:547.239:547.343

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AP5027944

(or III), according to equation



where  $X = O, S$ . Detailed experimental data for the preparation of following compounds are given and their physical properties are reported: IV, b.p. 91-92°C/760 mm; VI, b.p. 205-206°C/760 mm; V, b.p. 143°C/760 mm; VIII, m.p. 100-101°C. Orig. art. has 2 equations.

SUB CODE: 07/

SUBM DATE: 19Jan65/

SOV REF: 001/

OTH REF: 004

TS  
Card 2/2

00200-67 EMT(m)/EMP(j) IJP(c) HW/RM SOURCE CODE: UR/0191/66/000/007/0023/0025

ACC NR: AP6031748 AUTHOR: Zhinkina, L. N.; Vishnevskiy, F. N.; Zhinkin, D. Ya.; Zubkov, I. A. 38

ORG: none 39

B

TITLE: Reaction of butyl orthotitanate with phenyl methylphosphono-chloride or phosphorus oxychloride

SOURCE: Plasticheskiye massy, no. 7, 1966, 23-25

TOPIC TAGS: butyl orthotitanate, phenyl methylphosphonochloride, phosphorus oxychloride, polyorganophosphorustitanoxane, TITANATE, PHENYL COMPOUND, POLYMER STRUCTURE, CHEMICAL REACTION

ABSTRACT: A study has been made of the reaction of butyl orthotitanate (I) with phenyl methylphosphonochloride (II) as with phosphorus oxychloride (III). At up to 90°C, I and II taken in a 1/3 ratio react as follows:

$$\text{Ti}(\text{OC}_2\text{H}_5)_4 + 3\text{CH}_3\text{PO}(\text{OC}_2\text{H}_5)_2\text{Cl} \longrightarrow \text{Cl}_2\text{Ti}(\text{OC}_2\text{H}_5)_3 + 3\text{CH}_3\text{PO}(\text{OC}_2\text{H}_5)_2(\text{OC}_2\text{H}_5)_2$$

At above 100°C the reaction products undergo condensation to form a polymer with a titanoxane backbone. The presumed structure of the

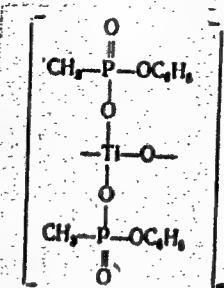
Card 1/2

UDC: 678.85+678.868.24

L 06200-67

ACC NR: AP6031748

polymer is:



A polymer with a high molecular weight is isolated by dissolving the reaction mixture in acetone and precipitating with water. I and III a cross-linked phosphorus-containing polyorganotitanoxane (170-180°C). The polymer contains 1 titanium atom per phosphorus atom, and 1 butoxy group per 3 titanium atoms. The synthesized polymers withstand temperatures of 190-200°C. Orig. art. has 3 figures.

SUB CODE: 07, 11/15 SUBM DATE: none/ ORIG REF: 007/ OTH REF: 002

Card 2/2 afa

L 36503-66 EWT(m)/EWP(j) RM

ACC NR: AP6017877

(A)

SOURCE CODE: UR/0062/66/000/005/0855/0861

AUTHOR: Zhinkin, D. Ya.; Morgunova, M. M.; Popkov, K. K.; Andrianov, K. A.

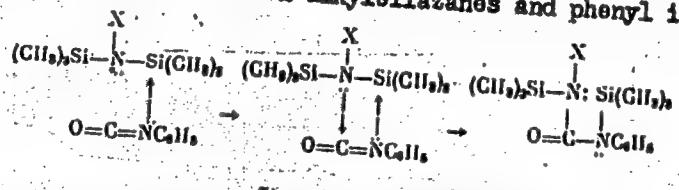
ORG: none

(B)

TITLE: Reactions of alkylsilazanes with organic isocyanates

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 5, 1966, 855-861

TOPIC TAGS: organic isocyanate compound, organosilicon compound, urea compound, chemical reaction

ABSTRACT: Reactions of organic isocyanates with various organosilazanes containing a hydrogen or a radical at the nitrogen atom were studied. The reaction of phenyl isocyanate and N-methylhexamethyldisilazane or phenyl isocyanate and N-diethyltrimethylsilylamine at 30-35° and atmospheric pressure involves rupture of the Si-N bond and the addition of the silyl group (CH<sub>3</sub>)<sub>3</sub>Si to the nitrogen of the isocyanate group, with formation of the corresponding urea derivatives. The following mechanism is proposed for the reactions between alkylsilazanes and phenyl isocyanate:

UDC: 661.518.5

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L 36503-66

ACC NR: AP6017877

where  $X = H, CH_3$ . The reaction of  $N,N'$ -trimethylsilyl- $N'$ -phenylurea with phenyl isocyanate produced trimethylsilyl isocyanate and  $N,N'$ -diphenyl- $N'$ -trimethylsilylurea. The following six new compounds were isolated and characterized:  $N,N'$ -bis(trimethylsilyl)- $N'$ -phenylurea,  $N$ -phenyl- $N'$ -phenyltrimethylsilylurea,  $N$ -trimethylsilylmethyl- $N'$ -trimethylsilylphenylurea,  $N,N'$ -bis(trimethylsilylphenyl)- $N'$ -methyldiurea,  $N$ -diethyl- $N'$ -phenyltrimethylsilylurea, and  $N$ -diethyl- $N'$ -phenyl- $N''$ -trimethylsilylphenyldiurea. Their IR spectra are given. Orig. art. has: 3 figures.

SUB CODE: 07/ SUM DATE: 29Nov63/ OTH REF: 008

Card 2/2 m.p.

L 23841-66 EWT(m)/EWP(j)/T IJP(c) JD/WW/JW/RM  
ACC NR: AP6007120

SOURCE CODE: UR/0079/66/036/002/0350/0352

AUTHOR: Zhinkin, D. Ya.; Korneyeva, G. K.; Korneyev, N. N.; Sobolevskiy, N. V.

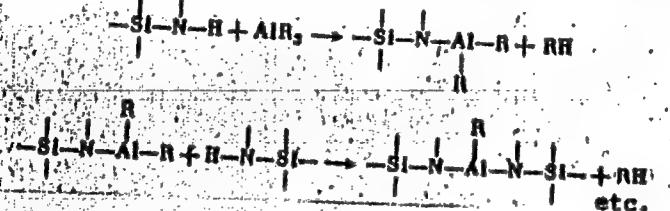
ORG: none

TITLE: Reaction of trialkyl(aryl)aminosilanes and hexaalkyldisilazanes with trialkyl-aluminum

SOURCE: Zhurnal obshchey khimii, v. 36, no. 2, 1966, 350-352

TOPIC TAGS: organoaluminum compound, organosilicon compound, chemical reaction

ABSTRACT: The reaction of organosilazanes and organoaminosilanes (hexamethyl- and hexaethyldisilazanes, triethyl- and triphenylaminosilanes) with trialkylaluminum (triethyl- and triisobutylaluminum) was studied and found to form alkylaluminum organo-silylamines. The reaction can be represented as follows:



Card 1/2

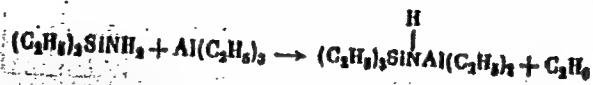
UDC: 546.287 + 547.236.2

2

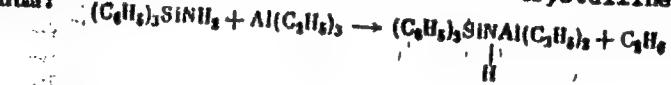
L 23841-66

ACC NR: AP6007120

The composition of the organosilylamines produced depends on the molar ratio of the reactants. The reaction of triethylaminosilane with triethylaluminum (1:1), the reaction occurs as follows:



Triphenylsilylamine readily reacts with triethylaluminum to form crystalline triphenylsilylaminodiethylaluminum:



Orig. art. has: 4 formulas.

SUB CODE: 07/ SUBM DATE: 21Jan65/ ORIG REF: 005/ OTH REF: 003

Card 2/2

ZHINKIN, D.Ya.; MAL'NOVA, G.N.; GORISLAVSKAYA, Zh.V.

Coammonolysis of trimethylchlorosilane and phenyl trichlorosilane. Plast. massy no.11:18 '65. (MIRA 18:12)

L 16512-66 ENT(m)/EXP(j) RM

ACC NR: AP6001496

(A)

SOURCE CODE: UR/0191/65/000/012/0017/0019

AUTHORS: Zhinkin, D. Ya.; Mal'nova, G. N.; Polonskaya, A. P.; Sobolevskiy, M.V.

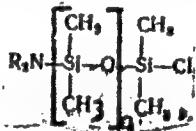
ORG: none

TITLE: Synthesis of  $\alpha$ ,  $\omega$ -bis-(hexamethyldisilao)polydimethylsiloxanes and investigation of their properties

SOURCE: Plasticheskiye massy, no. 12, 1965, 17-19

TOPIC TAGS: siloxane, organosilicon compound, hydrolysis, organic synthetic process

ABSTRACT: Hexamethyldisilylazochloropolydimethyl siloxanes (I) of general structure 1



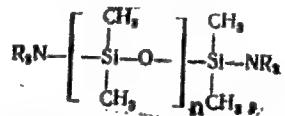
Card 1/2

UDC: 678.84 Z

L 16512-66

ACC NR: AP6001496

where  $n = 1, 3, 6$  and  $R = (CH_3)_3Si$  were prepared by reacting corresponding  $\alpha, \omega$ -dichlorodimethyl siloxanes with sodium bis-(trimethylsilyl)amide. The work was done according to the method indicated by C. R. Krüger and E. G. Rochow (Angew. Chemie, 74, No. 14, 491-2, 1962). The products were hydrolyzed in two ways: 1) by titrating with aqueous ammonia and with theoretical amounts of water, and then trapping the evolved HCl with pyridine; 2) with excess of water, in an alkaline medium to yield  $\alpha, (\omega)$ -bis-(hexamethyldisilazo)-polydimethyl siloxanes (II) having the general structure



where  $n = 3, 5, 7$ , and 13. Yields, elementary analyses, and physical properties of I and II are tabulated. It was established that in I with  $n > 3$ , the N-Si bond is not hydrolyzable to any practical extent. Orig. art. has: 1 table and 4 structures.

SUB CODE: 07/ SUBM DATE: none/ ORIG REF: 001/ OTH REF: 003

Card 2/2 SM

ZHINKIN, G.

Mechanized delivery of lumber to the mine. Mast.ugl. 5 no.10:21.  
0 '56. (MLDA 9:12)

1. Rabotnik Karagandinskoy normativno-issledovatel'skoy stantsii.  
(Karaganda Basin--Mine timbering)

ZHINKIN, G.N., docent, kand.tekhn.nauk

Effectiveness and permanency of electrochemical soil stabilization.  
Trudy LIIZHT no.165:56-63 '59. (MIRA 13:6)  
(Soil stabilization)

ZHINKIN, G.N., dots., kand. tekhn. nauk; PERETRUKHIN, N.A., st. nauchnyy  
sotr., kand. tekhn. nauk; KARASEV, Ya.M., dots., retsenzent;  
KASATKIN, A.I., inzh., retsenzent; KARPOV, K.N., dots., retsenzent;  
YERMAKOV, K.A., red.

[Roadbed construction in permafrost regions] Sooruzhenie zemlianogo  
polotna zheleznykh dorog v raionakh vechnoi merzloty; uchebnoe po-  
sobie po kursu "Stroitel'stvo zheleznykh dorog" dlja studentov  
dnevnogo, vechernego i zaochnogo obucheniia. Leningrad, Leningr.  
in-t inzhenerov zhel-dor. transporta im. V.N.Obraztsova, 1961. 61 p.

(MIRA 16:3)

(Railroad engineering—Cold weather conditions)  
(Frozen ground)

ZHINKIN, G.N.

Strengthening of the structural bonds in clay soils following  
electrochemical consolidation. Koll. zhur. 22 no.1:31-36 Ja-F  
'60. (MIRA 13:6)

1. Leningradskiy institut inzhenerov zhelezodorozhного transporta.  
(Clay) (Soil stabilization)

ZHINKIN, G.N. (Leningrad); BATURKIN, M.A. (Leningrad)

Using direct current and chemical additives in working  
clayey soils. Osn., fund. i mekh. grun. 2 no.5:14-16  
'60. (MIRA 13:9)  
(Soil stabilization) (Clay)

ZHINKIN, G.N., kand.tekhn.nauk, dotsent

Studies of the thixotropy of clayey soils. Sbor. trud. LIIZHT  
no.196:21-34 '62. (MIRA 16:9)

ZHINKIN, G.N., kand.tekhn.nauk, dotsent; BATURKIN, M.A., inzh.

Experience of using the electrochemical method for the industrial treatment of clay soils. Trudy LIIZHT no.180:33-46 '61. (MIRA 15:7)  
(Soil stabilization) (Railroad engineering)

ZHINKIN, G.N.

Study of the physicochemical processes arising in connection  
with electroosmotic drainage of clayey soil. [Trudy] NII esn.  
no. 50:28-37 '62. (MIRA 16:9)

ZHINKIN, G. N.; SERGEYENKOVA, K. K.

Study of methods of electric and chemical solidification of soils. [Trudy] NII GSN. no.50:38-44 '62. (MIRA 16:9)

ZHIMIN, G.N., kandidat tekhnicheskikh nauk.

Experience in using electrochemical soil reinforcement for stabilizing  
roadbeds. Sbor. LIZHT no.144:64-79 '52. (MIRA 8:4)  
(Railroads—Construction) (Soil stabilization)

ZHINKIN, G.N., kandidat tekhnicheskikh nauk, dotsent.

Some results of using electrochemical soil stabilization under  
operating conditions. Sbor. LIIZET no.150:72-82 '56. (MLR 9:11)  
(Soil stabilization) (Railroads--Earthwork)

ZHINKIN, G.N., kand.tekhn.nauk, dotsent; ORLOV, V.Yu., inzh.

Operation of scrapers under winter conditions. Trudy LIIZHT  
no.180:47-53 '61. (MIRA 15:7)  
(Scrapers--Cold weather operations)  
(Railroads--Earthwork)

ZHINKIN, G.N.

Strength of clay soils subjected to electrochemical treatment.  
Dokl. AN SSSR 120 no. 4:857-858 Je '58. (MIRA 11:8)

1. Leningradskiy institut inzhenerov zhelezsnodorozhnogo transporta  
im. V.N.Obraztsova. Predstavлено akademikom P.A.Rebinderom.

(Clay)  
(Electrochemistry)

ZHINKIN, G.N., kand. tekhn. nauk.

Over-all mechanization of earthwork. Transp. stroi. 7 no. 11:31-32  
N '57. (MIRA 11:2)  
(Railroads--Earthwork) (Earthmoving machinery)

ZHILKIN, G. E. kand. tehn. nauk, doce.

Improving the quality of clayey soils by using electrochemical stabilization methods. Sber. LILZHT no. 157: 164-189 '59.

(Soil stabilization)

(KIRI 12:11)

AUTHOR: Zhinkin, G. N. SOV/20-120-4-46/67

TITLE: On the Strength of Clay Grounds Subjected to Electrochemical Solidification (O prochnosti glinistykh gruntov, podvergnutых elektrokhimicheskому закреплению)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol. 120, Nr 4, pp.857-858 (USSR)

ABSTRACT: It was proved in many papers, that clay grounds can be drained and made water-resistive by this method and that they attain a higher degree of strength. The method was applied by the author to 5 objects for the purpose of solidifying soft ground of railroad track from 1948 to 1953. The investigation of ground cross-sections (monoliths) showed that an increased strength of ground particles spreads because of this treatment, and that the specific cohesion increases (Ref 1). The evidence resulting from studies on an operational scale substantiated the results of laboratory work (Refs 2, 3). In order to clarify the kind of modifications of ground properties in the course of time (the irreversibility of solidification) the treated objects were kept under observation for

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On the Strength of Clay Grounds Subjected to Electrochemical Solidification

SOV/20-120-4-46/67

some years and monoliths were taken from the anodic zone for investigation purposes. Although ground solidification is of an equal nature in the cathodic and intermediary zone, it has a somewhat smaller numerical value. Two granulometric analyses (aggregate analyses) conducted a) immediately after treatment, and b) some years later showed a solidification characteristic of all objects ("sandy agglomeration" = "opeschani-vaniye") which increased even after the termination of the electrochemical treatment. Table 1 shows the variations in the granulometric composition in the course of time. It can be seen that the amount of particles below 0,05 mm decreases while that of particles between 0,10 and 0,05 increases. The specific cohesion increased simultaneously, which was measured on a shearing-test apparatus (Table 1). The above given evidence tends to show a continuously progressive nature of the increase of strength of the treated ground and the formation of qualitatively new, water-resistant structural bindings, which are strengthened in the course of time. These processes are explained on the basis of conceptions originating from P. A. Rebinder (Ref 4). Towards the termination of electrochemical solidification the ground structure is of

Card 2/4

SOV/2o-12o-4-46/67

On the Strength of Clay Grounds Subjected to Electrochemical Solidification

a coagulation-crystallization character, and the number of concretions is sufficiently high to ensure an irreversible modification of ground properties. However, by this process the structural solidification is not finished. A further transformation of the coagulation binding into crystallization bindings proceeds, although more slowly than during the electrochemical treatment. In references 3 and 5 the chemical nature of these phenomena was considered to consist of secondary reactions, due to which calcium- and magnesium carbonates are produced in the cathodic zone, whereas in the anodic zone complex aluminum- and iron salts are formed as oversaturated solutions. The growth of their crystals and the formation of crystal combination results in a cementation of the ground and gradually causes an irreversible increase of its strength. There are 1 table, and 5 references, 4 of which are Soviet.

ASSOCIATION: Leningradskiy institut inzhenerov zheleznodorozhnogo transporta im. V. N. Obraztsova (Leningrad Engineering Institute of Railroad Transport imeni V. N. Obraztsov)  
Card 3/4

On the Strength of Clay Grounds Subjected to Electrochemical Solidification

SOV/2o-12o-4-46/67

PRESENTED: February 6, 1958, by P. A. Rebinder, Member, Academy of Sciences, USSR

SUBMITTED: December 13, 1957

- 1. Soils--Mechanical properties
- 2. Soils--Stabilization
- 3. Soils--Test methods
- 4. Soils--Electrochemistry

Card 4/4

ZHINKIN, G.N. (Leningrad); KOGAN, S.A. (Leningrad); KALGANOV, V.F. (Leningrad);  
BOLDYREV, V.N. (Leningrad)

Practices in the electrosilicatization of soils in Leningrad.  
Osn., fund. i mekh.grun. 7 no.1:5-6 '65.

(MIRA 18:4)

"APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R002064820003-6

APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R002064820003-6"

"APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064820003-6

APPROVED FOR RELEASE: 07/19/2001 CIA-RDP86-00513R002064820003-6"

ZHINKIN, X. L.

"Correlation Between the Privisory and Definitive Organs of ASCIDIA  
During their Metamorphosis," Dokl. AN SSSR 24, No . 6, 1939

Dept. Biol., 2nd Leningrad med. Inst., Dept. Gen. Morphology, Leningrad, VLEM,

ZHINKIN, Lev Nikolayevich; RUMYANTSEV, P.P., nauchnyy red.; VOROB'YEV,  
G.S., red. Izd-va; GURZHIEVA, A.M., tekhn. red.

[Regeneration of cells in the organism] Obnovlenie kletok v  
organizme. Leningrad, Ob-vo po raspr. polit. i nauchn. znanii.  
RSFSR, 1962. 33 p. (MIRA 16:2)

(REGENERATION (BIOLOGY)) (CELLS)

ZHINKIN, L.; ANDREYEVA, L.

Nuclear multiplication and DNA synthesis in the developmental process of somatic musculature. Dokl. AN SSSR 149 no.1:185-188 Mr '63. (MIRA 16:2)

1. Institut tsitologii AN SSSR. Predstavleno akademikom Y.A.Orlovym.  
(Cell nuclei) (Nucleic acids) (Muscle)

ZHINKIN, L.

"Influence of X-Rays on the Regeneration in *Lumbriculus Variegatus* Gr.,"  
Transactions of Leningrad Institute of Experimental Medicine, 3, pp 71-100, 1934.

ZHINKIN, L.

"Inflammatory Response of the Connective Tissue in the Amphioxus,"  
Dokl. AN SSSR, 45, No. 2, 1944

Dept. Morphology VIEM.

ZHINKIN, L.

"Regeneration of Extremities in Periplaneta Orientalis," Dokl. AN SSSR,  
48, No. 4, 1945; Tomsk State Univ. im. Kuybyshev

ZHINKIN, L. N.

PA 61/49745

USSR/Medicine - Transplantation  
Medicine - Muscles

Nov 48

"Transplantation of Muscles From a Dead to a Live  
Rabbit," L. N. Zhinkin, 3 1/3 pp

"Dok. Ak. Nauk SSSR" Vol. LXXXI, No 1

Muscular fiber forms in regeneration wherever  
possible and in the presence of least resistance.  
Transplanted tissues were found to change into  
muscular fiber and phenomena of nuclear degenera-  
tion were noted at times only about the borders  
of the tissue. Submitted by Acad L. A. Orbeli  
27 Aug 48.

61/49745

ZHINKIN, L.

PA-55/49760

USSR/Medicine - Muscles -  
Medicine - Regeneration

Nov 48

"Regeneration of Muscular Tissue as It Is  
Influenced by the Age of Mice," L. Zhinkin, 2t pp

"Dok Ak Nauk SSSR" Vol LXXXX, No 2

Operations on neonatal mice give rise to belief  
that myoblasts take an active part in regeneration  
of muscular tissue. Obviously, this method of  
regeneration is a characteristic of less differ-  
entiated muscular tissue. Submitted by L. A.  
Orbell 27 Aug 48.

55/49760

ZHINKIN, L. N.

35228

Petr Pavlivich Ivanov. (Embriolog. 1878-1942). Uchen. Zapiski (Leningr. Gos.

Un-T Im. Zhanova), Seriya Biol. Nauk, Vyp. 20, 1949, S.5-17, S Portr.-

Bibliogr: "Spisok Rabot P. P. Iavanova", 31 Nazv.

SO: Letopis Zhurnal 'nykh Stately Pol. 34, Moskva, 1949

ZHINKIN, L. N.

35216. Issledovaniya Nad Regeneratsiei U Sibirskogo Tritona Hynobius Kaiserlingi  
Uchen. Zapiski (Leningr. Gos. Un-T Im. Zhdanova), Seriya Biol. Nauk, VIP. 20, 1949,  
s. 275-300.---Bibliogr: s. 297-300.  
80: Letopis' Zhurhal'nykh Statey, Vol. 48, Moscow, 1949

PA 39/49T79

ZHINKIN, L.

USSR/Medicine - Plankton  
Medicine - Marine Organisms

Mar 49

"Early Stages of Development in Tiaropsis,"  
L. Zhinkin, Leningrad State U imeni A. A.  
Zhdanov, 4 pp

"Dok Ak Nauk SSSR" Vol LXV, No 3

Discovered large number of hydromedusae Tiaropsis  
in plankton at Murmansk Biological station.  
Traced early stages in development of metagenetic  
hydromedusae. Submitted by Acad Ye. N.

Pavlovskiy, 29 Jan 49.

39/49T79

ZHINKIN, L.N.

Petr Pavlovich Ivanov, Uch.zap.Len.un.no.113:5-17 '49.  
(MLRA 10:3)  
(Ivanov, Petr Pavlovich, 1878-1942)

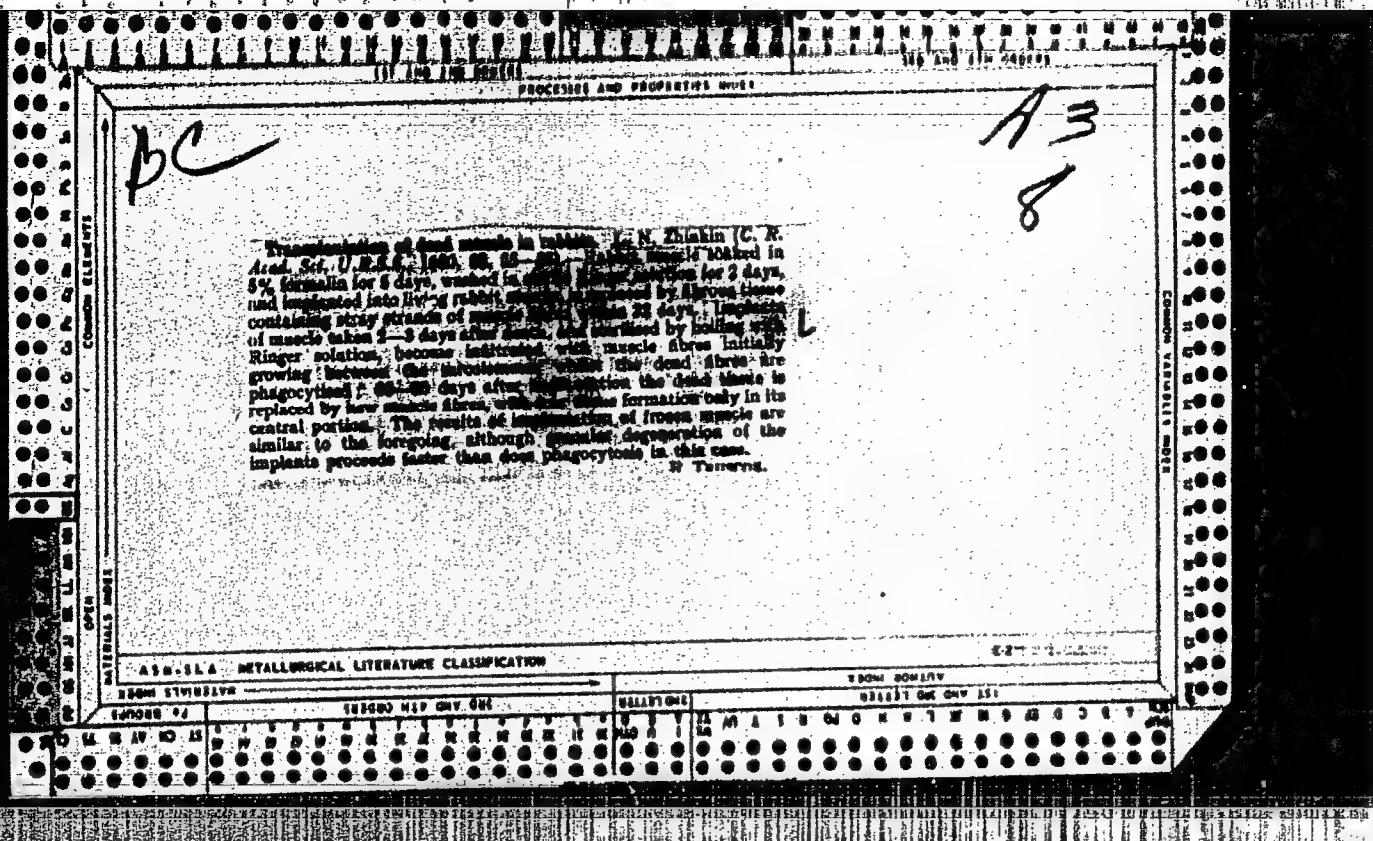
ZHINKIN, L.N.

Research on regeneration in the Siberian triton *Hylobius kaiserlingii*.

Uch.zap.Len.un. no.113:275-300 '49:

(MLRA 10:3)

(AMPHIBIA) (REGENERATION (BIOLOGY))



ZHINKIN, L.N.; KORSAKOVA, G.F.

Mitotic changes in symmetric retinas in unilateral burns. Doklady  
Akad. nauk SSSR 81 no.5:965-968 11 Dec 51. (CIML 21:5)

1. Presented by Academician Ye.N. Pavlovskiy 13 October 1951.

ZHINKIN, L.N.; KORSKOVA, G.P.

Reactive modifications in the symmetric retinene in white rats.  
Doklady Akad. nauk SSSR 81 no.6:1155-1157 21 Dec 51. (CML 21:5)

1. Presented by Academician Ye.N. Pavlovskiy 11 September 1951.
2. Zoological Institute, Academy of Sciences USSR.

1. ZHINKIN, L.; KORSAKOVA, G.
2. USSR-600
4. Priapulidae
7. Early development phases of *Halicryptus spinulosus*, Dokl. AN SSSR, 88, No. 3, 1953.
9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

ZHINKIN, L. N.

SVETLOV, P.G.; ZHINKIN, L.N.; ZAVARZIN, A.A.

In memory of Fedor Mikhailovich Lazarenko, Vest AMN SSSR no.2:  
77-78 '54. (MLRA 7:7)  
(LAZARENKO, FEDOR MIKHAILOVICH, 1888-1953)

SHISHKIN, B.K., professor; ROMANNOVA, A.G., kandidat biologicheskikh nauk, starshiy nauchnyy sotrudnik; MARKOV, G.S., doktor biologicheskikh nauk, dotsent; DANILEVSKIY, A.S., kandidat biologicheskikh nauk, dotsent; SHTAYNBERG, D.M., doktor biologicheskikh nauk; LOWAGIN, A.G. aspirant; SELL'-HEKMAN, I.Y., mladshiy nauchnyy sotrudnik; ZHINKIN, L.N., doktor biologicheskikh nauk, professor; IPATOV, V.S., student 7th year; KOZLOV, V.Ye., kandidat biologicheskikh nauk, starshiy nauchnyy sotrudnik; KARTASHEV, A.I., kandidat biologicheskikh nauk, starshiy nauchnyy sotrudnik; MITSENKO, A.A., starshiy nauchnyy sotrudnik; VASILEVSKAYA, V.K., doktor biologicheskikh nauk, dotsent; RYUMIN, A.V., kandidat biologicheskikh nauk; NAUMOV, D.V., kandidat biologicheskikh nauk, mladshiy nauchnyy sotrudnik; KHOZATSKIY, L.I. kandidat biologicheskikh nauk, dotsent; GOROBETS, A.M., kandidat biologicheskikh nauk, starshiy nauchnyy sotrudnik; GOLDEVSKIY, V.S. assistent; GERBIL'SKIY, N.L., doktor biologicheskikh nauk, professor; ALEKSANDROV, A.D., professor; KOLODYAZHNYY, V.I.; TURBIN, N.V.; ZAVADSKIY, K.M.

[Theory of species and the formation of species]. Vest. Len. un. 9 no. 10:43-92 0 '54.  
(MLR 8:7)

1. Chlen-korrespondent Akademii nauk SSSR (for Shishkin, Aleksandrov)

(Continued on next card)

SHISHKIN.B.K., professor; ROMANKOVA,A.G., kandidat biologicheskikh nauk,  
starshiy nauchnyy sotrudnik, and others.

[Theory of species and the formation of species]. Vest.Len.un. 9  
no.10:43-92 0 '54. (MIRA 8:7)

2. Leningradskiy gosudarstvennyy universitet (for Shishkin, Romankova,  
Markov, Ipatov, Kozlov, Kartashev, Godlevskiy, Gerbil'skiy, Aleksandrov)  
3. Zoologicheskiy institut Akademii nauk SSSR (for Shteynberg, Naumov)  
4. Kafedra entomologii Leningradskogo gosudarstvennogo universiteta  
(for Danilevskiy). 5. Kafedra darvinizma Leningradskogo gosudarstvennogo  
universitete (for Lomagin, Gorobets). 6. Kafedra geobotaniki Leningrad-  
skogo gosudarstvennogo universiteta (for Nitsenko). 7. Kafedra botaniki  
Leningradskogo gosudarstvennogo universiteta (for Vasilevskaya). 8. Ka-  
fedra zoologii pozvonochnykh Leningradskogo gosudarstvennogo universi-  
teta (for Khozatskiy). 9. Leningradskoye otdeleniye Vsesoyuznogo in-  
stituta udobreniy, agropochvovedeniya i agrotekhniki (for Sell'-Bekman)  
10. Institut eksperimental'noy meditsiny Akademii meditsinskikh nauk  
SSSR (for Zhinkin).

(Origin of species)

ZHINKIN, L. N. and MIKHAYLOV, V. P.

On 'The New Cell Theory' (by O. B. Lepeshinskaya). Arkhiv. Anatomii, Gistologii i Embriologii, 32, No. 2, 66, 1955.

Translation, Science, v. 128, 25 Jul 1958.

Moscow Oblast Sci. Res. Inst. of Obstetrics and Gynecology.

ZHINKIN, L.N.; MIKHAYLOV, V.P. (Leningrad)

"New cellular theory" and its foundation in practice. Usp.sovr.  
biol. 39 no.2:228-244 Mr-Ap '55. (MIR 8:7)

(CYTOLOGY,

Lepeshinskaya's theory)

Translation W-31624, 30 Jan 56

ZHINKIN, L.N.

Characteristics of development and the systematic position of  
Priapulida. Uch.sap.Ped.inst.Gerts. 110:129-139 '55.(MLRA 9:7)  
(Gephyrea)

USSR/Human and Animal Morphology. Pathological Anatomy

S-5

Abs Jour : Rof Zhur - Biol., No 20, 1958, No 92887

Author : Zhinkin L.N., Chekulayeva L.I.

Inst : Institute for Experimental Medicine, Acad. of Medical Science,  
USSR

Title : Influence of Functional Disturbance of the Brain on  
Epithelium of the Skin and Cornea of the Eye

Orig Pub : Yozhegodnik. In-t eksperim. med. Akad. med. nauk SSSR, 1955,  
L., 1956, 376-380

Abstract : With impairment of the higher nerve activity in rats histo-  
logical changes of the skin of the back, ears, soles, and  
the cornea of the eye were not demonstrated. The extent of  
mitosis in the epithelium of the cornea proved almost iden-  
tical in test and control animals; only rats with an exci-  
table nervous system showed increased mitosis. With appli-  
cation of a punctated burn on the cornea of the rat with an  
"inhibited" type of reaction there was observed some increase

Card : 1/2

USSR/Human and Animal Morphology. Pathological Anatomy

S-5

Abs Jour : Ref Zhur - Biol., No 20, 1958, No 92887

in the mitotic activity in the first twenty-four hours of the experiment, and then it decreased. With application of a tourniquet on the hind extremity of the rat mitotic activity of the epithelium of the cornea decreased at first and later increased. Apparently an adaptation to the continuous action of an irritant gradually occurred in animals. In rats with a predominantly inhibitory type of reaction the inhibition itself appeared to be an adaptation to a constantly acting irritant, which did not lead to a change in the mitotic activity; in irritated animals over-activity of the cortical processes caused an increase in mitosis, i.e., a reaction contrary to that usually observed with a transitory effect of electric current. -- Ya.Ye. Khesin

Card : 2/2

GRACHEVA, N.D.; ZHINKIN, L.N.; SHCHERBAN', E.I.

Using liquid emulsions in histoautoradiography. Med.rad. 1 no.2:  
87-93 Mr-Ap '56. (MIRA 9:9)

1. Iz patologoanatomiceskoy laboratorii (zav. L.V.Funshteyn)  
TSentral'nogo nauchno-issledovatel'skogo rentgeno-radiologicheskogo  
instituta (dir. - prof. M.N.Pobedinskiy) Ministerstva zdravookhra-  
neniya SSSR.

(PHOTOGRAPHY,

auto-impression on photographic plate with liquid  
emulsions of tissue sections labeled with radioisotopes  
(Rus))

(HISIOLOGY,  
same)

(ISOTOPES,  
same)

Labels for documents A and B (fig. 15) are epithelium of the tongue and small intestine as studied by the method of radioautography. (J. Lab. Clin. Med., 46, 345-7 (1955). Values of radioactivity are given for labeled methionine or Na<sup>75</sup>PO<sub>4</sub> labeled with Na<sup>22</sup>. The tongue and small intestine of them were also examined by the radioautographic technique (photographs shown) on sections which were coated with NIKRO type 1 photobematum. Inclusion of methionine paralleled the visibility of the radioisotope tracer, and the intensity of the radiolabeling was the same. The results substantiate the classical theory (c. Abond, et al., J. Lab. Clin. Med., 46, 345-7 (1955)).

G. M. Knobland

Digest - B-49030

USSR / Human and Animal Physiology. Sense Organs.  
Vision.

T

Abs Jour: Ref Zhur-Biol., No 22, 1958, 102304.

Author : Zhinkin, L. N.

Inst : Leningrad Society of Naturalists

Title : The Inclusion of Methionine with Marked S<sup>35</sup> Into  
the Developing Eye Lens.

Orig Pub: Tr. Leningr. o-va yestestvoispyt., 1957, 73, No 4,  
14-18.

**Abstract:** An investigation was conducted by the method of  
radioautography with utilization of a fluid emul-  
sion of the "R" type. The eyes of 15-day old  
embryos of rats and 45-day old embryos of cats  
served as material. Methionine, with marked S<sup>35</sup>  
from a calculation of 0.5 mcuries per 1 kilogram,  
was introduced subcutaneously to a pregnant cat.

Card 1/3

USSR / Human and Animal Physiology. Sense Organs. T  
Vision.

Abs Jour: Ref Zhur-Biol., No 22, 1958, 102304.

**Abstract:** Methionine, from a calculation of 180 mcurie per animal was introduced intraperitoneally to a rat. 24 hours after introduction the greatest inclusion of S<sup>35</sup> was discovered in the epithelium of the lens (L) and the transitionally equatorial zone; the least, in the central part. In the central nucleus there was the least amount of S<sup>35</sup>. Computation, conducted on a trace autograph (short exposure) also showed a decrease of the intensity of inclusion from the equator towards the center, and coincided with the results obtained on contrast autographs (long exposure). The nuclei of fibers L absorbed more S<sup>35</sup> than did the cytoplasm, which was dependent on the physiological state and not on area. The developing L absorbed S<sup>35</sup>.

Card 2/3

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USSR / Human and Animal Physiology. Sense Organs.  
Vision

T

Abs Jour: Ref Zhur-Biol, No 22, 1958, 102304.

Abstract: considerably more intensively than the adult one. The inclusion was proportional to the histologic differentiation of the tissues and, therefore, it was greatest in the epithelium of L at the equator, i.e., in the cambial zone. This allows judging the rapidity of protein renovation. The discovered regularities of  $S^{35}$  distribution in the L of embryo, apparently reflect the general regularities of the intensity of inclusion into cells, which possess varied degrees of differentiation. --  
L. A. Katsnel'xon.

Card 3/3

ZHINKIN, L.N. (Leningrad)

Incorporation of  $^{35}$ -labeled methionine in a developing crystalline lens [with summary in French]. Trudy Len. ob-va est. 73 no.4:14-18 '57. (MIRA 11:6)

1.Otdel histologii instituta eksperimental'noy meditsiny AMN SSSR.  
(Crystalline lens) (Methionine)

ZHINKIN, L.N. (Leningrad, Tsentr, Kanal Kronshteyn, d.11, kv.9)

Experimental study of the development of the spinal cord; a survey  
of the literature [with summary in English]. Arkh.anat.gist. i  
embr. 35 no.3:101-114 My-Je '58 (MIRA 11:7)  
(SPINAL CORD)

ZHINKIN, L.N.; ORLOVA, G.N.; SIROTKINA, M.Yu.

Inclusion of methionine in developing and regenerating somatic muscles [with summary in English]. *Arkh.anat.gist.* 1 embr. 36 no.1:32-38 Ja '59. (MIRA 12:3)

1. Laboratoriya gistolologii (zav. - prof. L.N. Zhinkin) Instituta eksperimental'noy meditsiny AMN SSSR. Adres avtora: Leningrad, Kirov-skiy pr., 69/71., Institut eksperimental'noy meditsiny AMN SSSR. (MUSCLES, metab.)

methionine, inclusion of prep. labeled by radio-sulfur during regen. & develop. (Rus)) (METHIONINE, metab.)

musc., inclusion of radiosulfur-labeled methionine during regen. & develop. (Rus))

KHARAUZOV, N.A., prof., glavnnyy red.; MIKHAYLOV, V.P., prof., namestitel' glavnogo red.; BIRYUKOV, D.A., prof., otv.red.; AVETIKYAN, B.G., doktor biol.nauk, red.; ANICHKOV, N.N., akademik, red.; ANICHKOV, S.V., prof., red.; ARBUZOV, S.Ya., prof., red.; VESELKIN, P.N., prof., red.; VOYNO-YASNETSKIY, M.V., prof., red.; DANILOV, I.V., kand.biol.nauk, red.; ZHABOTINSKIY, Yu.M., prof., red.; ZHIMKIN, L.N., prof., red.; IL'IN, V.S., red.; IOFFE, V.I., prof., red.; KARASIK, V.M., prof., red.; KUPALOV, P.S., prof., red.; MANINA, A.A., kand.med.nauk, red.; NEYFAKH, S.A., doktor biol.nauk, red.; RIKKL', A.V., prof., red.; SVETLOV, P.G., prof., red.; SMORODINTSEV, A.A., prof., red.; CHISTOVICH, G.N., doktor med.nauk, red.; BESEDIN, I.K., tekhn. red.

[Yearbook of the Institute of Experimental Medicine of the Academy of Medical Sciences of the U.S.S.R. for 1958] Eshagodnik za 1958 god. Leningrad, 1959. 538 p. (MIRA 14;1)

1. Akademiya meditsinskikh nauk SSSR, Moscow. Institut eksperimental'noy meditsiny. 2. Chleny-korrespondenty Akademii meditsinskikh nauk SSSR (for Biryukov, Veselkin, Il'in, Ioffe, Karasik, Svetlov, Smorodintsev). 3..Deystvitel'nyye chleny Akademii meditsinskikh nauk SSSR (for Anichkov, S.V., Kupalov).

(MEDICINE, EXPERIMENTAL)

ZHINKIN, L.N.; ZAVARZIN, A.A. (Leningrad); DONDUA, A.K. (Leningrad)

Use of tritium-labeled compounds in autoradiography. T3itologija  
2 no. 6:625-639 N-D'60. (MIRA 13:12)  
(TRITIUM) (AUTORADIOGRAPHY)

ZHINKIN, L.N.; ZAVARZIN, A.A.

Radioautographic study of the incorporation of radioactive sulfur of sodium sulfate, mercanine and methionine. Biofizika 5 no. 6:734-739 '60. (MIRA 13:10)

1. Institut eksperimental'noy meditsiny AMN SSSR, Leningrad.  
(AUTORADIOGRAPHY) (SULFUR IN THE BODY)

ZHINKIN, L.N.

Stimulation of mitoses in the intestinal epithelium during painful stimulation of the tongue. Dokl. AN SSSR 134 no.3:694-696 S '60.  
(MIRA 13:9)

1. Leningradskiy gosudarstvennyy pedagogicheskiy institut im. A.I. Gertsena. Predstavлено акад. Ye.N. Pavlovskim.  
(KARYOKINESIS) (PAIN) (INTESTINES)

ZHINKIN, L.H.

Distribution of  $^{35}$ -cysteine in cells of the gastric mucosa of white rats. Dokl. AN SSSR 134 no.4:942-944 O '60.(MIRA 13:9)

1. Institut tsitologii Akademii nauk SSSR. Predstavleno akad. Ye.N. Pavlovskim.  
(CYSTEINE)

(SULFUR IN THE BODY)

S/020/60/134/004/022/023  
B016/B060

AUTHOR: Zhinkin, L. N.

TITLE: Distribution of <sup>35</sup>S Cysteine in the Cells of Gastric Mucosa in  
White Rats <sup>M</sup>

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 134, No. 4,  
pp. 942 - 944

TEXT: There are several indications that the substrata, in which <sup>35</sup>S cysteine and methionine are contained, are different. The author wanted to clarify the characteristics of inclusion of <sup>35</sup>S cysteine, and for this purpose studied its distribution in the stomach of white rats. There, he was able to check the inclusion in proteins, on the one hand, and that in sulfomucopolysaccharides, on the other, whereupon he compared his results with the inclusion dynamics of sodium sulfate and methionine, in which the sulfur was tagged as well. The radioactive indicators were subcutaneously injected in doses of 0.5  $\mu$ curie/g each. The rats were decapitated 1 to 24 hours after injection. Both contrast- and trace autograms (Fig. 1) were

Card 1/4

Distribution of  $S^{35}$  Cysteine in the Cells of  
Gastric Mucosa in White Rats

S/020/60/134/004/022/023  
B016/B060

produced on a liquid НИКФИ-Р (NIKFI-R) emulsion (for the method see Ref. 6). The varying inclusion intensity and distribution characteristics of  $S^{35}$  cysteine can be estimated on contrast autograms. In the author's interpretation of the autoradiographic data and the structural characteristics of the epithelial sections examined, the  $S^{35}$  of cysteine is intensely incorporated both by the cells of the germinal layer of the compound flat epithelium and by the mucilaginous cells of the gastric glands. The  $S^{35}$  of  $Na_2SO_4$  is included (Refs. 7 - 10) in the sulfomucopolysaccharides.

As may be seen from the autograms (Fig. 1d), it is stored by the mucilaginous cells of cardiac and fundal glands. The cells of cornified epithelium do not absorb any  $S^{35}$  at all, while the connective tissue does so only by relatively small amounts. After 24 h, the  $S^{35}$  of the sulfate is almost completely removed from the glands (Ref. 7). As contrasting to sulfate sulfur, the  $S^{35}$  of methionine is intensively stored by the cells of the germinal layer of the compound flat epithelium. The connective tissue incorporates very little  $S^{35}$  of methionine, much less than is the case after

Card 2/4

Distribution of  $S^{35}$  Cysteine in the Cells of Gastric Mucosa in White Rats

S/020/60/134/004/022/023  
B016/B060

the sulfate injection. The author states that, in a certain respect, there are both similarities and differences between the distribution of  $S^{35}$  of cysteine and the  $S^{35}$  of  $Na_2SO_4$  in the mucous glands. The distribution dynamics of  $S^{35}$  in the compound flat epithelium, however, exhibits full agreement after the injection of both cysteine and methionine. As a result, the agreement between the incorporation of  $S^{35}$  cysteine and  $S^{35}$  methionine in tissues free from mucous glands proves the participation of the former in the protein synthesis. The author derives the conclusion from his results that  $S^{35}$  cysteine can be utilized as a radioactive indicator in the study of the synthesis and metabolism of proteins, and of sulfomucopolysaccharides as well. More research work, however, appears necessary in this field. There are 1 figure and 10 references: 3 Soviet, 3 US, 1 German, 2 French, and 1 Swiss.

ASSOCIATION: Institut tsitologii Akademii nauk SSSR (Institute of Cytology of the Academy of Sciences, USSR)

Card 3/4

ZHINKIN, L.N.; SIROTINA, M.Yu.

Dynamics of inclusion of  $^{35}$  labelled methionine and sodium sulfate in the epithelium of the stomach of white mice. *Arkh. anat. gist. i embr.* 40 no. 1:32-40 Ja '61. (MIRA 14:2)

1. Laboratoriya eksperimental'noy histologii (zav. - prof. V.P. Mikhaylov) Instituta eksperimental'noy meditsiny AMN SSSR).  
Adres avtorov: Leningrad, pr. Maklina, 32, Institut tsitologii A. AN SSSR.

(METHIONINE) (SULFUR METABOLISM) (STOMACH)

ZHINKIN, L.N.

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